Table 6. Examples of preferred embodiments of the methods for modifying glycosylation in a eukaroytic microorganism, e.g. *Pichia pastoris*

Desired	Suitable	Suitable Sources of	Suitable	Suitable
Structure	Catalytic	Localization Sequences	Gene	Transporters
	Activities		Deletions	and/or
				Phosphatases
Man ₅ GlcNAc ₂	α-1,2-	Mns1 (N-terminus,	OCH1	none
	mannosidase	S. cerevisiae)	MNN4	
	(murine,	Och1 (N-terminus,	MNN6	
	human,	S. cerevisiae, P. pastoris)		
	Bacillus sp.,	Ktr1		
6	A. nidulans)	Mnn9		
		Mnt1 (S. cerevisiae)		
		KDEL (SEQ ID NO:6),		
		HDEL (SEQ ID NO:5)		
		(C-terminus)		
GlcNAcMan ₅ GlcN	GlcNAc	Och1 (N-terminus,	OCH1	UDP-GlcNAc
Ac ₂	Transferase	S. cerevisiae, P. pastoris)	MNN4	transporter
	I, (human,	KTR1 (N-terminus)	MNN6	(human, murine,
	murine, rat	KDEL (SEQ ID NO:6),		K. lactis)
	etc.)	HDEL (SEQ ID NO:5)		UDPase (human)
		(C-terminus)		
		Mnn1 (N-terminus,		
		S. cerevisiae)		
		Mnt1 (N-terminus,		
		S. cerevisiae)		
·		GDPase (N-terminus,		
		S. cerevisiae)		
GlcNAcMan₃GlcN	mannosidase II	Ktr1 Mnn1 (N-terminus,	ОСН1	UDP-GlcNAc

Ac ₂	S. cerevisiae)	MNN4	transporter)
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